

CLAIMS

What is claimed is:

1. A method for installation of a pier in a soil matrix comprising, in combination, the steps of:

- a) positioning a hollow tube apparatus having a longitudinal dimension and a lateral dimension in a soil matrix, said hollow tube apparatus including a hollow core and a lower end;
- b) inserting materials into the hollow tube apparatus in the soil matrix;
- c) moving the hollow tube apparatus incrementally to simultaneously impart lateral forces on the mixture within the hollow tube apparatus and longitudinal forces on the inserted materials to thereby form a compacted lift as the hollow tube apparatus is removed in an incremental step from the soil matrix; and
- d) repeating steps (b) and (c).

2. The method of Claim 1 wherein the mechanical member placed in the hollow tube apparatus extends substantially the longitudinal length of the hollow tube apparatus.

3. The method of Claim 1 including a step of removing the mechanical member from the hollow tube apparatus.

4. The method of claim 1 wherein the hollow tube apparatus is formed with an inwardly beveled lower edge end.

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5. The method of Claim 1 wherein the hollow tube apparatus includes a mechanical portion with a lower peripheral surface defining an angle intermediate the longitudinal and lateral directions.

6. The method of Claim 1 including vibrating the hollow tube apparatus.

7. The method of Claim 1 wherein the hollow tube apparatus is cylindrical.

8. The method of Claim 1 wherein the hollow tube apparatus includes a uniform diameter hollow core, and a bottom mechanical device with an internal rim at the bottom of the hollow tube apparatus, said bottom mechanical device being beveled inwardly.

9. The method of Claim 1 wherein the hollow tube apparatus is driven or pushed into the soil matrix.

10. The method of Claim 1 wherein the hollow tube apparatus includes a mechanical portion with a lower peripheral surface defining an angle intermediate the longitudinal and lateral directions.

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9. The method of Claim 1 wherein the hollow tube apparatus is driven or pushed into the soil matrix.

10. The method of Claim 1 wherein the hollow tube apparatus includes a mechanical portion with a lower peripheral surface defining an angle intermediate the longitudinal and lateral directions.

11. The method of Claim 1 including raising and lowering the hollow tube apparatus incrementally to impart forces on the soil matrix and aggregate.

12. A pier formed by the process of any of the claims 1-11.